



# Pin-Hole Planetarium

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## PARTS:

- [Metal Bowl \(1\)](#)
- [Base \(Microwave Splatter Guard\) \(1\)](#)
- [Hammer & Nails \(1\)](#)
- [Metal file \(1\)](#)
- [Soldering equipment \(1\)](#)
- [High Powered LED \(1\)](#)
- [Mini Toggle Switch \(1\)](#)
- [AC/DC Wall Transformer \(1\)](#)
- [Hook-up wire \(1\)](#)

## SUMMARY

Using a few electronic components and some common household materials you can create a simple planetarium for your home.

## Step 1 — Pin-Hole Planetarium



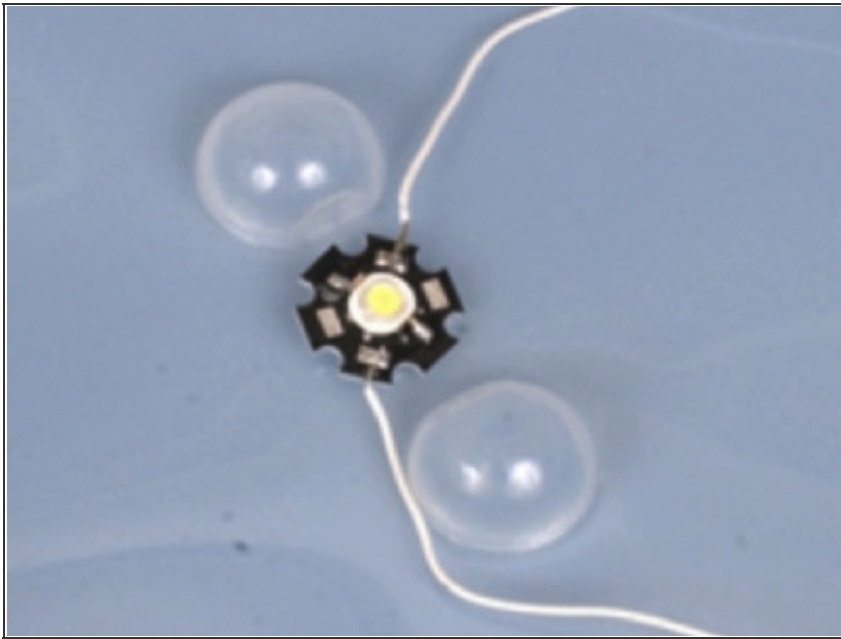
- It's important to put together a list of materials you will need. This project requires a few electronic components and things you may already have.

## Step 2



- There are many different ways to make your dome. I used a nail and hammer. I had an extra hand help me with this step as I hammered a nail through the bowl into a wooden block — simple, yet effective. These holes should be relatively small since you want your projections to look like the actual night sky.
- Make sure to file down the dome. The punched holes are sharp. If you want to create constellations, print out a sheet that has the constellations and place the sheet over the bowl as you drive a nail through it.

### Step 3



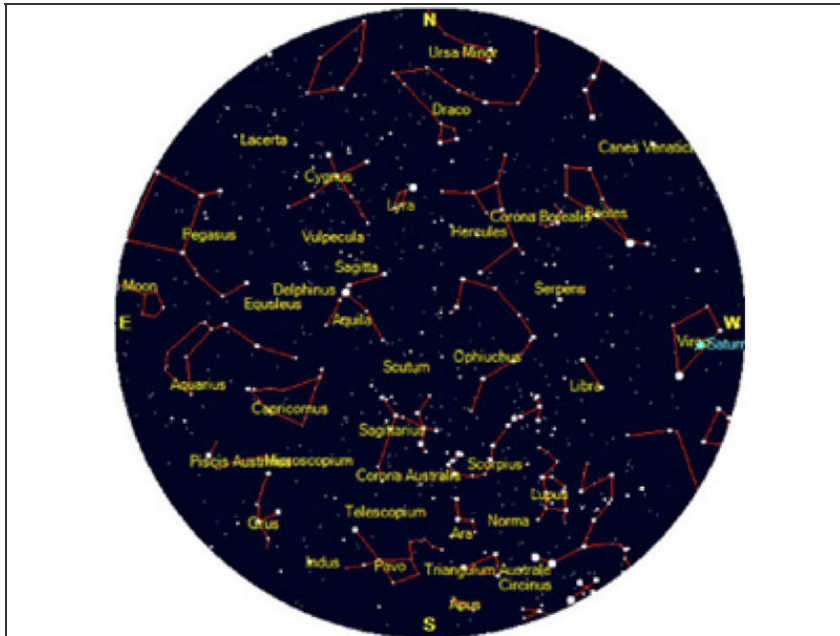
- Prepare the high power LED by soldering wire to its terminals.

### Step 4



- Connect switch and assembly. I soldered the wire to the switch, attached it to the base and connected it to the power supply. I cut the end off of the Wall Adapter Power Supply so that I could connect one end to the switch and the other to the LED.
- It is important to make sure light doesn't escape from your enclosure except through the holes in the dome. In order to ensure this I covered the base with black paper.
- Secure the LED on top of the base with glue or double-sided tape.  
Warning: LED is extremely bright.

## Step 5



- Place the dome on top, turn off the lights and enjoy!
- Troubleshooting Issues: Make sure the LED isn't shorting on the enclosure's base. Check to be sure your soldering is secure on terminal and switch.

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